

Amendments to the Abstract:

Please replace the previous Abstract with the following redlined Abstract:

A 108-tap 1:4 interpolation FIR filter device for digital mobile telecommunication having a single bit input ~~is provided~~. The filter ~~that~~ employs a look-up table minimum scheme and a pipeline structure in which the size of the entire look-up tables is significantly reduced by dividing four coefficient groups into three parts, respectively, and effectively using the symmetry of the 108-tap filter coefficient and the symmetry within the look-up table. ~~Thus, the filter can simultaneously process 108-tap 1:4 interpolation FIR filter operations for a single input of four channels by means of a single filter without increase of an operating frequency.~~ The FIR filter includes an input shift register and selector for processing a single bit input of four channels, an address generator for producing addresses of the look-up table, look-up table ~~groups 0~3~~ ~~group 0~3~~ for producing filter outputs group by group via the look-up table and the calculator using the address as an input, a pipeline ~~registers~~ ~~register I~~ for delaying the filter outputs for coefficient group which are outputted in parallel, a group selector for converting the delayed outputs in serial channel by channel, and a pipeline ~~registers~~ ~~register II~~ for matching the time of filter output channel by channel. ~~Therefore, the filter has advantages that it can reduce the design area of the FIR filter by using the look-up table constituting the filter and also processing filter inputs from the four channels by means of a single filter and that it can reduce the power consumption by using the same operating frequency to a general single filter.~~